<MBA Degree Thesis>

AY 2014

UNPOPULAR SPECIAL PRODUCT
Shelf-based scarcity effect towards consumers' preferences of limited edition product

35122314-0 AMIL RAMDHAN JOENOES
GLOBALMARKETING INNOVATION
C.E. PROF. KENNETH ALAN GROSSBERG
D.E. PROF. KOJI AIBA D.E. PROF. M. SEAN HACKETT

Summary

This research want to study about consumer preference on limited edition product (LEP) compared to its standard variation product (SVP) pair while having different stock. LEP are special variation of its SVP. Producer creates limited edition product for short term boost sales[1] and enhance brand image (Esch & Winter, 2010). The benefits and profit that keep going from LEP are possible because the scarcity effect of limited edition. The scarcity effect imply that a product will be evaluated and prefer more when it is in smaller number compared to others. In Japan, many of fast moving consumer goods (FMCG) companies that produce snack product exercise this strategy. And despite new LEP might possess certain risk, the term "limited-edition" itself proves to be beneficial, hence making this strategy keep going (Daisuke, 2008).

Meanwhile, in retail situation, consumers might be influenced by shelf-based scarcity. Similar with normal scarcity effect, shelf-based scarcity makes a product in shelf which are stocked less than other product seems more attractive, especially when consumer don't have prior preference (Parker & Lehmann, 2011). In Japan retail context, often the new LEP are sold together with its SVP. Thus, consumer preference might face influences both from the appeal of LEP scarcity value

[1] Limited edition fragrances: Here today, gone tomorrow (2000).

and the difference of products stock in the shelf. Furthermore, consumer personality also internally influence product preference.

Related to LEP in FMCG industries, their product often have different flavor than its SVP pair. The difference in flavor, especially if its new and unique as never been tried before, might not acceptable for everyone. Baumgartner and Stennkamp (1996) suggest there is a personality trait that related to flavor difference, called exploratory acquisition of product (EAP) tendency. Here, people with high-level of EAP are variety seekers, who look for new products or flavors. Meanwhile, low-level EAP are variety avoiders, they tend to keep with ordinary product and avoid unfamiliar flavor. Thus, consumer tendency of exploratory acquisition of product (EAP) might influence how LEP will be appraised as well.

This research is using a 3 between-subject (stock amount of LEP compare to SVP: abundance, equal, depleted) x 2 within-subject (EAP level: high, low) experimental design. The survey is conducted online, and centralized on participant encounter with fictional ice cream brand called Pana & Bean. It has two flavor, the limited edition Houjicha and Toffee Crunch flavor, and the original Chocolate Macadamia flavor. Then participants are asked to appraise six dimensions of consumer preference: popularity, quality, restock frequency, attractiveness, perceived novelty, and interest to try. They do the appraisal for both flavor, and also asked of their final choice between the two flavors. A scale of EAP is also given to determine variety seeker and variety avoider.

For the data analysis, there are three separate analyses. Two are based within the flavor itself, and one is based on the range difference of the limited edition Houjicha flavor and the Chocolate Macadamia flavor. The six consumer preference is calculate using two-way ANOVA in all three analyses. The calculations of choice share is conducted only in range different analysis. The result yield few significant point on some of consumer preference, although it's not sufficient enough to support whole model. In turn, the pattern of raw data will be discussed as the main finding of this research.

As predicted, variety seeker tend to appraise LEP over the SVP, more than the variety avoider. However, when comparing within one flavor, surprisingly variety avoider tend to appraise

the flavor (either the LEP or SVP) better than variety seeker. Regarding the final choice of product, LEP was chosen more by variety seeker than variety avoider.

Regarding the stock difference of shelf-based scarcity, it shows a pattern where LEP is appraised more in the depleted, then equal condition and the least appraisal in abundance conditions. The other pattern of shelf-based scarcity is shown at analysis within flavor. For LEP, the pattern is increasing from abundance to depleted conditions, and the contrary happen for SVP. In term of choice share, the depleted condition is the condition that surpasses the other two. LEP was chosen more in depleted, while in abundance and equal they have almost equal share. Even when the EAP also included in calculation, it shows that only variety seeker in depletions conditions that have the biggest choice share of LEP. Variety avoider also shown increasing choice shares in depleted condition, although not as drastic as variety seeker.

<Inside Cover>

UNPOPULAR SPECIAL PRODUCT
Shelf-based scarcity effect towards consumers' preferences of limited edition product

35122314-0 AMIL RAMDHAN JOENOES
GLOBALMARKETING INNOVATION
C.E. PROF. KENNETH ALAN GROSSBERG
D.E. PROF. KOJI AIBA D.E. PROF. M. SEAN HACKETT

TABLE OF CONTENTS

CHAPTER 1 INTRODUCTION

"... Let me remind you of memorable scene in the recent movie Iron Man 3*, where Iron Man Tony Stark borrows a cheap plastic wristwatch from a schoolboy named Harley. Harley promptly reminds Stark that this is no ordinary piece, it is his sister's limited edition watch, therefore most valuable thing. And indeed, it is a Dora the Adventurer limited edition watch!"*

Harish Baht, The Hindu Businessline, 2013

Consumers like the word "special", and it is a public secret among marketers. Responding to this consumer preference, marketers often release special products. A limited edition product (LEP) is a one of kind, special product. Usually, the LEP is a different variant of its counterpart, the standard variant product (SVP). The marketers position the variance of a LEP to be more "special" than the SVP, enticing consumer to the LEP's special product attributes that SVP products do not have.

This limited edition strategy is often seen in luxury products. *Haute couture* brands like Louis Vuitton or Hermes are pinnacle examples of how fashion products and a limited edition strategy unite with each other (Betts, 2001; Branch, 2004). Some fashion houses, such as Calvin Klein, Channel and Issey Miyake, offered their limited editions in smaller quantities. However, these are still luxury collections of limited edition fragrances[2]. Meanwhile, designers such as Stella McCartney take a different route, by allowing H&M, a Swedish leading fast-fashion company, to sell her limited edition design clothing These limited editions sold out in a matter of hours (Wu et. al., 2012).

The games industry is also familiar with the idea of a limited edition strategy. For the release of the highy-anticipated remake of "Zelda: Wind Maker" for the WII U, Nintendo created limited edition Zelda bundles. These bundles give a thematic Zelda color to the Wii U console[3].

[2] Limited Edition Fragrance: Here Today, Gone Tomorrow (2000).
[3] Nintendo to Launch Zelda Themed Wii U bundle (2013).

Other games are also often sold under a limited edition brand, and offer consumers special content such as bonus maps to add to the game's play experience[4].

Lately, the limited edition idea has also been received well in the FMCG industry or food sectors. Mandom Corp. launched a limited edition Gatsby wax trial set for American consumers[5]. Inside the 10 dollar pouch, there are four variations of Gatsby moving rubber to try. The ice cream maker Haagen Daaz is teasing consumer appetites through two limited edition ice cream flavors, along with one limited edition ice cream bar[6]. In Japan, Haagen Daaz seems to emphasize this limited edition strategy, as their website offers direct links to new and limited edition products[7].

The reason this strategy is successful is due to the core characteristic of what makes a limited edition product limited: scarcity. When product availability is reduced relative to other products, consumer will choose it more often as compared to when the product has more availability (Verhallen and Robben, 1994; Mittone and Savadori, 2009). This phenomenon is called the scarcity effect, and it entails how consumers evaluate scarce products more highly or as more desirable than less-scarce products. Several theories explain why scarcity can generate more attractiveness and desirability. Lynn (1989, 1992) proposed the Scarcity-Expensiveness-Desirability (SED) model, stating that people might believe scarce goods cost more, and that higher price suggests higher quality and status. This makes scarcer goods feel more desirable. Another approach to describe how scarcity works and is perceived is through uniqueness. By acquiring a scarce product, consumers are able to differentiate themselves from others, or use the scarce product as a status symbol to validate their uniqueness and superiority (Synder, 1992 di varhepen; Amaldos & Jain, 2005).

Another theory which may apply is the Reactance theory, which focuses on how individuals react to the loss of perceived freedom. When individuals encounter the instance of unavailable goods, their reactance might cause them to become more attracted to those same unavailable goods. This would increase the motivation to obtain the product (Gupta, 2013). Compared with the other

[4] EA Unveils Battlefield 3 Limited Edition and North American Pre-Order Bonus Items (2011).
[5] GATSBY MOVING RUBBER limited edition trial set now available on amazon U.S (2012)
[6] Haagen-dazs(R) brand makes summer even sweeter with new gelato and limited edition flavors (2014).
[7] http://www.haagen-dazs.co.jp/products/new-limited.html

three theories described, Reactance theory is far more flexible in explaining how a limited edition product that may not be a conspicuous consumption good can still become attractive, without being expensive or distinctively unique.

Scarcity itself is basically divided into two groups; scarcity of supply, or scarcity of demand. Scarcity that is created by demand tends to be unintentional or driven by market activity. Meanwhile, scarcity by supply tends to be the result of manipulation, especially on the part of the manufacturer. In scarcity by supply, there are two further different types of scarcity: limited-time-scarcity (LTS) and limited-quantity-scarcity (LQS). Mass products using a limited edition strategy often belong in the LTS group, as the product might still be available for the given time it is to be sold.

Nevertheless, LTS and LQS are both concepts of scarcity, and may not be something discernible in a real context. In retail conditions, another form of scarcity might occur, as there are several products that have different availabilities. Here, the presence of scarce products on the shelf alongside other products may intrigue shoppers and make them believe in the fact that there is a shelf-based scarcity. The scarcity here is the amount of product that is seen on the shelf, where the scarcer product is evaluated as more popular, perceived as higher quality, and more likely to be chosen by consumers (van Herpen et. al., 2009). Consumer preferences might play a vital role in this shelf-based scarcity, and thus might weaken the effect (Parker & Lehmann, 2011). Hence, shelf-based scarcity occurs most often when consumer do not have prior knowledge of the product, nor any specific preference (like buying unfamiliar electronics equipment, or when shopping in unknown markets).

When referring to shelf-based scarcity, a FMCG limited edition product in Japan is often sold together with its standard variant product (SVP) line. Furthermore, considering how frequent a limited edition product might launch, manufacturers make the new product variant (or flavor in food products) something that is unknown to most buyers as well. Additionally, there may be scenarios in which the LEP product has greater on-shelf stock than the SVP products; or the reverse when SVPs are stocked more than LEPs. The different scenarios for two FMCG products may affect consumers'

appraisal of LEP products differently, and the described theories of shelf-based scarcity might be suggested.

Besides the shelf-based scarcity effect, there is also another factor that may influence consumer preferences of limited edition products. The variations in limited editions of FMCG products tend to be in their taste or flavor. Often, the flavor variations are so different from the existing flavor expectations that consumers currently have. This "newness", or novelty in flavor, might be attractive to some consumers. Esch and Winter (2010) found that consumers will welcome novelty of limited edition products depending on the consumers tendency of exploratory acquisition of products (EAP). The variety seeker might want to explore many new tastes offered by FMCG manufacturers, while variety avoiders might resist exploring new tastes and maintain their preference to consume standard variant products.

This thesis will explore how consumers with different EAP tendencies evaluate a limited edition product and its standard variant product under a variety of conditions, such as the various combinations of product stock differences.

CHAPTER 2 LITERATURE REVIEW

This chapter will discuss about the theoretical background of two main topics that underlying this research. The first is scarcity, its include discussion from economic perspective, company or marketing perspective, and consumer side. Another topic is consumer variety seeking behavior that will focus more on exploratory acquisition of product (EAP) tendency.

Section 1. Scarcity

Scarcity is a fundamental aspect in economy of having limited resources in the world full of people with unlimited wants and needs. Although various economic decisions can be made to allocate the world's resources efficiently, there are still not enough products to fulfill all people's wants and needs. People must make choices between different products by trading off one desire to satisfy another. They have to decide which want that they one to fulfill first.

1.1 – Scarcity

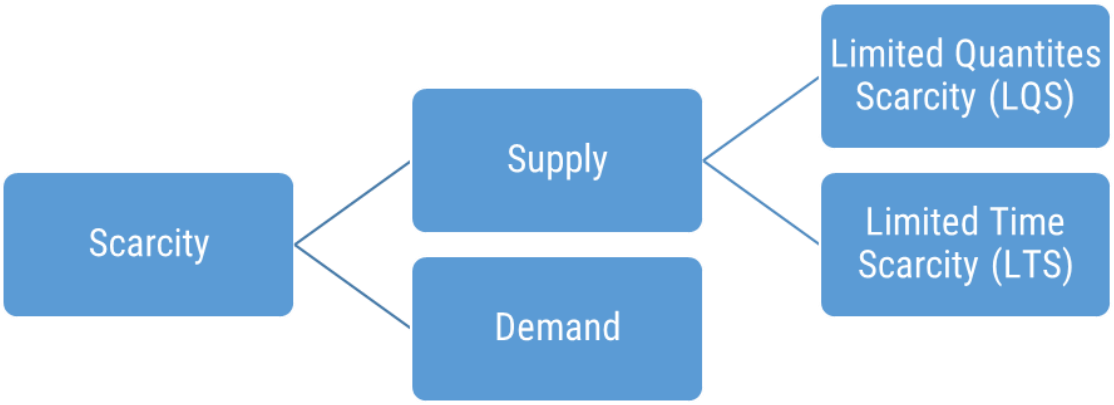
Scarcity is one of dominant parts that can affect human economic behavior. It enhances the perceived value of products, thus resulting in higher product desirability, increased quantities purchased, shorter searches, and greater satisfaction with the purchased product (Aggarwal, Yun, and Huh 2011; Lynn 1991). Another study by Mittone and Savadori (2009) also suggest that scarcity messages not only increase the choice of a good, but also increase the willingness to pay. There are two types of scarcity, based on how scarcity is created: exogenously or environmentally-induced and endogenously or human-induced (Oses-Eraso, Udina, and Viladrich-Grau 2008). This research will put focus on the endogenously or human-induced scarcity.

The human–induced scarcity in retail market can be further generated due to forces of supply controlled by the marketer and demand forces controlled by the consumer. A "supply side scarcity" can be triggered when the marketer intentionally controls the supply of the product in the retail market and make their product become rare in the market. And a "demand side scarcity," arise

when consumer demand for the product is very high thus leading to stock depletion even though the retailer does not limit their supply of the product.

According to Cialdini (2008), there are two different ways for a retailer to communicate the scarcity of a commodity in the marketplace: limited-time scarcity (LTS) and limited-quantity scarcity (LQS) (figure 2.1). In limited-time scarcity, the retailer offers a product in a particular period of time, after which the offer becomes unavailable (e.g., "Weekend Sale"). This make the degree of scarcity increases along the course of time. On the other hand, in a limited-quantity scarcity the product offer is made available only for a particular quantity making the degree of scarcity increases with each unit sold (e.g., "Sale for the first 250 items"). Moreover, limited-quantity scarcity can be triggered by changes in supply or demand side, contrary to the limited-time scarcity which can only be due to the supply side (Gierl, Plantsch, and Schweidler 2008).

Figure 2.1 Summary of Scarcity Variations.



A consumer does not have to compete against other consumers in LTS offer, since they know that the offering will be there for a particular period of time. They only have to buy the product within the period set by the retailer. Nevertheless, this promotional time restrictions influence consumer purchase intentions. A study by Swain, Hanna, and Abendroth (2006) found that time restrictions lower purchase intentions by lowering deal evaluations but also suggest that time restrictions enhanced purchase intentions by creating a sense of anticipated regret and urgency.

On the contrary, an LQS offer is restricted to a particular number of items. Every time a consumer purchases the product, the remaining number available for purchase decreases, enhancing a sense of uncertainty for the consumer. This can motivate consumers to compete against each other in purchasing for the limited products. Success in buying scarce item creates both utilitarian as well as hedonic fulfillment, and consumers tend to have a "pride like satisfaction" of having won the game against other consumers (Garretson and Burton 2003).

Aggarwal, Jun, and Huh (2011) examined the relative effectiveness of LTS and LQS offer in advertisements and the role of brand concept in the relationship between scarcity and purchase intentions. They found LQS being more effective than LTS and also support the interaction between scarcity messages and brand concept. The study also emphasized that restricted offers will affect purchase intentions more for a symbolic brand than for a functional brand. Another study by Meyer (1980) found the reason why LQS is more effective than LTS is due to the locus of causality. There are two types of locus of causality: internal and external. The locus of causality is considered to be internal if the factor is located within oneself and external if those factors lie outside the individual. The study shows that consumers are more encouraged if an offer is attributed to internal factors. LQS put emphasis on a first-come-first-serve; making consumers who get LQS offering credit themselves for the savings. And since the opportunity to take such personal credit is limited in LTS offering, this is making LQS more effective than LTS.

1.2 – Theory Related to Scarcity

A commodity is described as a useful and transferable object (Brock, 1968). The basic premise of commodity theory is "that any commodity will be valued to the extent that it is unavailable" (Brock 1968, p. 246). Brock postulates that obtaining a scarce commodity may result in a positive feeling of "being chosen." In order that customers feel being chosen, the retailers have to to actively select consumers to receive the scarce product.

The Uniqueness

Lynn, Harris (1997) proposed an instrument that can reliably and validly measure individual differences in the desire for unique consumer products. They argue that consumers who are looking for a rare product are those who have need for uniqueness, and possess more materialistic traits such as being more acquisitive and possessive, highly competitive and status-oriented people. They also suggest that consumers who have particular desire for scarce products also tend to be more desirous of new products, have more interest in customized products, and are more inclined to shop at small, unique retail outlets.

Surprisingly, on the other hand, Lynn, Harris (1997) found conformity is also a trait for consumers who have strong desire toward unique products. They argue that people use their belonging to define oneself in relation to others. People use the unique products to find their place inside the society. Although people want to be distinctive and unique, they also need to fell fit in and belong (Brewer, 1991).

People who have desire to have unique products as their possession consider getting themselves scarce products because they perceive the scarce products as a unique item. The feeling of being chosen achieved when consumer feel the uniqueness of the product, making it a potentially desirable acquisition.

Reactance Theory

In scarcity condition, consumer's freedom of choice is restricted. In a normal situation with no scarcity imposed, consumer can make a choice whenever they want with unlimited amount of products. On the contrary, when scarcity exists, consumers are forced to make a choice within a restricted condition, both in limited quantity scarcity and limited time scarcity. For example, when consumers face a "special product available - only 100 items" offer, they know that if they do not make a decision quickly, the special product may not be available any more. Similar logic can be applied to scarcity in time, when people face a "special product available only for today" offer they

are forced to decide within the restricted time imposed. In both situations, consumers may feel that their flexibility related to potential purchase has been restricted by scarcity.

Reactance theory predicts that such imposition in consumer freedom or flexibility could create a negative feeling of inconvenience, which in turn could reduce the positive effect of scarcity on product evaluation (Gupta, 2013). According to reactance theory, people feel inconvenienced when they sense that their freedom or flexibility has been restricted, thus react negatively against the cause of their freedom restriction (Brehm 1966; Grabitz-Gniech 1971; Edwards, Li, and Lee 2002; Fitzsimons and Lehmann 2004).

1.3 Shelf-Based Scarcity

Although scarcity might often be a marketing strategy to increase product's attractiveness, scarcity can influence consumer preference accidentally. Imagine when traveling abroad, and shopping for wine. There are two kinds of wine, with similar price, but one is stocked less than others. In this condition, most people will go along with the wine that has less stock. They go with it because it was the more popular one.

This phenomena is called the bandwagon effect, where consumer buy products that other consumer have chosen before them (Corneo & Jeanne, 1997). This approach might contradict the scarcity approach of uniqueness because its means the consumer is also buying product that others had. Yet, here as the shelf-based scarcity, the scarce condition of wine became a cue of popularity, which sparked by demand of numerous people before them. Thus, consumer might conclude that the scarce product was the best one with higher quality (van Herpen, Pieters & Zeelenberg, 2009). This shelf-based scarcity is affecting consumer the most when consumer didn't have prior knowledge or any preference about the products (Parker & Lehmann, 2011).

1.4 – Limited edition product definition

Limited editions are special items which are different from the standard products and produced only in a limited number. Different industries have different ways to create its limited edition, such as in fashion industry the differences is on the design and material, on the other hand we may see differences in fashion packaging. For food industry, limited edition goes beyond the color of product/packaging because food has more senses as taste and smell.

Unlike seasonal editions in which the consumers already know that they will find the same product at the same time next year, limited edition product cannot guarantee consumer to find it again next year. One of the examples that we can find in Japan is, vending machines provide only cold drinks during the summer and hot drinks during the winter, special flavor of snacks for each season.

This research focuses on FMCG industry, especially food products. For the purpose of this research, we will limit the definition of limited edition only to flavor variation. Because we think flavor is the main point of food products, where the true value of food exists. Different packaging is optional but the limited edition product should have the "Limited Edition" term written on the packing so that the consumer will know instantly that it is a Limited Edition product.

There two types of consumer product: conspicuous consumption goods and non-conspicuous consumption goods. Thorstein Veblen (1899) described conspicuous consumption as consumption with the purpose of impressing others, where one gains social status by signaling wealth and power through conspicuous consumption. According to Gierl & Huetll (2010) there are three combinations of social benefits of conspicuous consumption goods and types of scarcity as follows:

1) Status and type of scarcity:
    a. When the scarcity is due to limited supply the number of potential co-owners of the product is restricted from the first time the product enters the market. If a consumer desires a higher social status, possessing such an expensive product can signal that a

limited number of people possess the same superior level of social status. Hence, the positive state of being envied can be achieved.

b. When the scarcity is due to high demand, there are many other owners who possess the same product. Thus, this product does not provide the same opportunity to signal superiority

2) Uniqueness and type of scarcity

a. Possessing a scarce product due to limited supply make a consumer increases his/her uniqueness in comparison to friends or colleagues. The positive state of being envied and respected can be achieved by possessing such goods.

c. When the product is scarce due to high demand, one can no longer achieved uniqueness by purchasing this product. There are too many other owners for the same product. Thus, this product does not provide the same opportunity to signal uniqueness in comparison to friends or colleagues.

3) Conformity and type of scarcity

a. Conformity to an exclusive social group can be signaled by using a scarce product if this group appreciates this product. For example, to signal conformity a rare ticket concert of the group's favorite band.

b. When the product is scarce due to high demand, there are unlimited supply, the group members can no longer show their exclusiveness by using the product.

On the other side, there is phenomenon denoted as the [scarce-is-good] heuristic, where scarcity is used as a heuristic cue from which consumers draw inferences about a product's overall quality, which positively influences the attitude toward the product (Griskevicius et al. 2009). However, this heuristic does not seem to be effective when scarcity results from limited supply. Signals such as "Limited edition" were ignored by consumer when non-conspicuous consumption

goods are promoted. They probably regard such signals as marketing tactics of suppliers to boost the sales of non-conspicuous consumption goods. (Gierl & Huettl. 2010)

1,5 – Limited edition in Japan

Japanese consumers (and Japanese marketers) are no strangers to the concept of limited edition products. In fact, with some observations, Japanese might embrace the LEP strategy like no other countries.

A launch of fancy pink car might be a good example (Ono, 1998). Sanrio together with Daihatsu Motor Co launched limited-edition Hello Kitty car. The price is $7,425, with Kitty-patterned upholstery, comes in white or metallic rose color. Its speedometer is decorated with the Kitty logo: At 20 kilometers per hour—12.5 miles per hour—Kitty is asleep; at 60 kilometers per hour she is smiling; at the 80-kilometer-per-hour mark, she is sweating bullets. Daihatsu has shipped 1,200 Kitty cars that year and most have sold out.

In 2008, Tower Records launched a limited edition of Japanese pop singer from Sony label Shoko Nakagawa's single CD. Although the CD cover also serves as an ad for Nike, with a big Nike sneaker in the singer's hand, it only take 22 days to for 3,000 CD copies to sold out. Looking to other electric products, console games are another example with multiple limited edition bundles. With the current console gaming industry populated by only three giant names – only 1 is not a Japanese company – it is arguable that it was Japan who popularized, if not initiated, limited edition strategy in this industry.

Food industry is a sector where limited editions strategy is often be seen. Recently, in Tokyo, there are limited edition bananas with serial number went on sale (Ashcraft, 2014). The premium bananas were released by Dole at Takashimaya Department Store in Shinjuku. The bananas were priced at 590 yen ($5.80) each, packaged in a special box, and sported a serial number on the skin. Only 59 bananas went on sale, and they were offered only on May 9. The name of these bananas is "Gokusen" (極撰), with the character for "goku" (極) referring to "extreme" or "culmination," and the character for "sen" (撰) referring to "compilation." The event is a Japanese pun: the number five

is "go" (五), while the number nine is "ku" (九), which refer to the date: May 9. These limited edition bananas were first launching in 2009.

One of the most famous snack producer in Japan, Calbee, produces limited edition for its product line several time a year. For example for Jagarico line, Calbee produced limited edition of Cream Onion flavor in September 2013, then Mentaiko flavor in November 2013. Followed by Shio Aburi flavor in February 2014 and Asparagus Bacon flavor on April 2014. Considering this is only for one line of product, the effort for creating another limited edition in another product would suggest how critical limited edition strategy is for Calbee in Japan.

Furthermore, the fact that this strategy keep going means a warm welcome from Japanese consumer. This phenomenon was afforded due to Japanese perception on limited edition products, especially FMCG product in convenient store as having less risk, allowing LEP strategy to have success than any other country (Daisuke, 2008).

Section 2. Variety Seeking Behavior

People have different personalities, which affecting how they make decisions as consumers. For marketers, having understanding of human personalities is important too. By gaining insight of consumer personalities, marketers are able to segment and target effectively towards people that respond to the offering. One of the personality traits that is important is exploratory tendencies in consumer buying process. Activities such as risk taking and innovative behavior in purchasing product, variety seeking and brand switching, recreational shopping and information search, and interpersonal communication about purchases may be regarded as the embodiment of exploratory tendencies in the consumer buying process (Raju, 1980).

There are two-dimensional representations of exploratory consumer buying behavior. Exploratory acquisition of products (EAP) entails the potential for sensory stimulation in product purchase through risky and innovative product choices and varied and changing purchase experiences. The other one is exploratory information seeking (EIS) which satisfied consumer's

cognitive stimulation needs through the acquisition of consumption-relevant knowledge out of curiosity (Baumgartner, 1996). For the purpose of this research, we will put focus only on EAP.

CHAPTER 3 RESEARCH QUESTION AND HYPOTHESIS

The chapter will talk the fundamentals element of this thesis. First, several research questions are proposed as the basic guidance of what sought to be answer with this research. In the second section, the variables that build this research will be explained one by one, it consist of one independent variable and two dependent variables. Afterward, a series of hypothesis is presented, trying to predict what this research outcome will be based on the existing theory.

Section 1. Research Question

1. Conceptual Research Question

   What is the consumer preference of a Limited edition product (LEP) when it's stocked with different amount than the standard variant products?

2. Operational Research Question

a. What is the consumer preference of a Limited edition product (LEP) when it's stocked with similar amount than the standard variant products (SVP)?
b. What is the consumer preference of a Limited edition product (LEP) when it's stocked with more amount than the standard variant products (SVP)?
c. What is the consumer preference of a Limited edition product (LEP) when it's stocked in lesser amount than the standard variant products (SVP)?
d. Is there any difference between high-level exploratory acquisition of product (EAP) consumer and low-level EAP in appraising Limited edition products (LEP)?

Section 2. Research Variables

There are three main variables in this research. First is consumer's product preference which belong to dependent variable. There will be some elaborations of several sub-variable within consumer preferences. Next is stock of products in the shelf, followed by different level of

exploratory acquisition of product (EAP) tendency. The latter two variables belong to independent variable. All these three variables will be explained as below.

- Dependent Variable (VB): Consumer preference of product

  Conceptual Definition

  Consumer appraisals of products and their final choice of product.

  Operational Definition

  Consumer appraisals of product is covered by these six dimensions:

  i) Product popularity: How popular is the product seen in the shelf?
  ii) Product quality: How is the quality of the product seen in the shelf?
  iii) Restock frequency: How frequent is the product seen in the shelf restocked?
  iv) Attractiveness: How attractive or interesting is the product seen in the shelf? (Gierl & Huetll, 2010))
  v) Perceived novelty: How common or novelty is the product seen in the shelf? (Andrews & Smith, 1996)
  vi) Interest to try: How likely is the consumer intention to try the product seen in the shelf?

  Meanwhile, consumer final choice of product is defined as choosing one product between the Limited Edition Product and Standard Variant Product

- Independent Variable 1 (VB1): Stock of products in the shelf

  Conceptual Definition

  The different amount of product stocked in shelf.

  Operational Definition

  The different stock amount of Limited Edition Product (LEP) compared to stock amount of Standard Variant Product (SVP) in the shelf.

  Variations

There are three variations for stock in shelf variable. First, is Equal condition, whereas both of the LEP and SVP are equally stocked almost full. Second, the Abundance condition, which the limited edition has almost full stock while the standard variant has almost empty stock. Finally, the Depleted condition is which the limited edition has almost empty stock while the standard variant is almost full stock.

- Independent Variable 2 (VB2): Level of exploratory acquisition of product (EAP) tendency

  Conceptual Definition

  Consumer tendency to seek sensory stimulation in product purchase through risky and innovative product choice, and varied and changing purchase and consumption experience (Baumgartner & Steenkamp, 1996)

  Operational Definition

  Consumer tendency whether to seek new product flavor variations like Limited edition product (LEP) or avoiding it, thus keep with standard variant product (SVP).

  Variation

  The EAP variables are divided into two level, high and low. The high-level EAP consumer mean they are more likely to seek the new product variant, like LE products. Meanwhile low-level EAP consumer are more likely to avoid for new product variant, and keep with the standard variant product.

Section 3. Research Hypothesis

Based on the explanation of the theory in previous chapter, this thesis would like to propose the following hypotheses:

Hypothesis 1: EAP

a) Generally, High-level EAP consumer will appraise LE product more than the low-level EAP consumer. (Apprasial $_{Total}$: LEP $_{High}$ > LEP $_{Low}$)

b) In total, High-level EAP consumer will tend to choose LE product more than the low-level EAP consumer. (Choice $_{Total}$: LEP $_{High}$ > LEP $_{Low}$)

Hypothesis 2: Abundance Condition

a) For Abundance condition, high-level EAP consumer would appraise LE product less than in Equal condition. (Appraisal $_{High}$: LEP $_{Abundance}$ < LEP $_{Equal}$)
b) For Abundance condition, low-level EAP consumer would appraise SV product more than in Equal condition (Appraisal $_{Low}$: SVP $_{Abundance}$ > SVP $_{Equal}$)
c) In Abundance condition, high-level EAP consumer would choose less LE product than in Equal condition. (Choice $_{High}$: LEP $_{Abundance}$ < LEP $_{Equal}$)

Hypothesis 3: Depleted Condition

a) For Depleted condition, low-level EAP consumer would appraise LE product more than in equal condition. (Appraisal $_{Low}$: LEP $_{Depleted}$ > LEP $_{Equal}$)
b) For Depleted condition, high-level EAP consumer would appraise SVP product less than in equal condition. (Appraisal $_{High}$: SVP $_{Depleted}$ < SVP $_{Equal}$)
c) In Depleted condition, low-level EAP consumer would choose LE product more than in equal condition. (Choice $_{Low}$ LEP $_{Depleted}$ > LEP $_{Equal}$)

Hypothesis 4: Interaction

There will be an interaction effect between levels of Exploratory acquisition of product (EAP) tendency and three different conditions of Limited edition product (LEP) stocks in the shelf. (Appraisal and Choice = EAP x Stock Difference)

CHAPTER 4 RESEARCH METHODOLOGY

This chapter will be discussing about the research methodology used in this study. First I will discuss the Pretest for the main survey preparation and follows by discussion of the main survey which includes the participant's sampling, the content of survey, and how the survey is conducted. This chapter will also review the statistical analysis method that is going to be used.

Section 1. Research Design

The research design of this research consists of 3 parts (Stock of Limited Edition Product: Equal/Abundance/Depleted) x 2 (Exploratory Acquisitions of Products tendency level: High/Low) between subject factorial design. The layout of research design can be seen in table 4.1 below

Table 4.1 Research Design Layout

		Stock Conditions of LEP		
		Abundance	Equal	Depleted
Exploratory Acquisiton of Product (EAP) Tendency	High-level	Abundance Stock High-level EAP	Equal Stock High-level EAP	Depleted Stock High-level EAP
	Low-level	Abundance Stock Low-level EAP	Equal Stock Low-level EAP	Depleted Stock Low-level EAP

Section 2. Pretest

The pretest goal is to find two flavors for main survey, where one is for the limited edition flavor and the other is just the normal flavor. This flavor survey is distributed online through Surveygizmo.com online survey service. The participants are random convenient samples. There is only one requirement for the participants in this flavor survey, which is for them to have reside and been living in Japan for more than six months, regardless of nationality. The assumption for the time is within six months period, the participant will already had experience of encountering limited edition products. The pretest psarticipant data's summary can be seen in the figure A in the appendix.

For this research, ice cream is utilized to be the product that participant is going to choose. The distinctive value for limited edition is its uniqueness compare to the normal flavor which is supposed

to be relatively common flavor. For this goal, I modified six ice cream flavors based on the current flavor exist in the Japanese food & beverages industries.

The six flavors in alphabetic order are: Chocolate Macadamia, Honey Oats and Raisin, Houjicha and Toffee Crunch, Seasalt Vanilla and Biscuit, Strawberry Cheesecake, and the last one is White Chocolate and Grapefruits flavor. The survey then asks the participant to rank these six flavors from the most unique flavor (rate = 1) to the most common flavor (rate = 6). The statistic calculation result shows that Chocolate macadamia is the most common flavor (μ=4.45), while the most unique flavor is Houjicha & Toffee crunch. (μ =2.66).

Section 3. Main Survey

The main survey is created on Surveygizmo.com platform, a professional online survey service. For this research, a randomization technique is put on participants in certain conditions as a necessary part of the experimental research step (Goodwin, 2010), which Surveygizmo provides as their paid feature. The main survey has two different versions based on the language interface. One is created in English as the main language in the menu and the survey content, while the other one is created in Japanese. The two hyperlink of the survey, each for English version and Japanese version are mentioned together in the announcement for this survey. The announcement was posted on Facebook, and participants were suggested to share it with their friends – a sampling technique called snowballing. Besides just plain text, the announcement was also accompanied by several pictures to make it more attractive and informative.

The link in the survey announcement will bring them to the survey page. The first page was the Introduction part. It includes detail of the researcher and mentions the survey is part of the thesis preparations. The participant was told that the survey topic is about shopping simulations, and they will were asked to choose a product. The introduction also mentioned the participant pre-requisite to reside in Japan for more than six months. It also stated that participants are able to join in the optional voucher lucky draw as their incentive for filling this survey. By completing the survey, it also became a sign of their consent to fill this survey.

The second page of the survey asked for the participants' data. The first question is the gender followed by their age range, 20 or younger, 21-30 year old range then continues to 50 or older. The next question asked the participants to state their occupations, where the options were limited to student, employee, and others. They also were asked about in which prefecture do they live in now with options of Japan 47 prefectures. Afterward, they were asked to write down their nationality. If they weren't Japanese, another question appears and asks since when (approximate year and month) they have been living in Japan.

Next, in the third page, participant was given a vignette of shopping simulation for this survey. A study using vignette in marketing study is something common (Wason, Polonksy, & Hyman, 2002). They will look for a fictional ice cream brand called Pana & Bean. The name was choose to avoid any associations with any existing brand, although brand effect is not considered important in this research. There will be two flavors, based on the pretest result. Here is the complete vignette:

"*Imagine you are shopping for weekly groceries. After collecting the goods you need, you finally stand on the ice cream aisle. It's a very sunny day and you crave for an ice cream. Due to the budget limitation, you can only buy 1 cup of ice cream.*

After looking for a while, you stop on ice cream called Pana & Bean, and consider two flavors it has. The two flavors are the Limited Edition Houjicha & Toffee Crunch flavor and the original Chocolate Macadamia flavor (pictured below)."

Figure 4.3 Picture of the ice cream package

Furthermore, still on the same page, each flavor was pictured like in figure 4.3, with the front side of the cup seen clearly, along with the blurred back side, enhancing the sense of reality. The flavor was written in both Japanese and English, with English as the main one. Moreover, for the limited edition Houjicha flavor, there is a seal of 期間限定 a Japanese translation of limited editions, to differentiate itself from the standard product variant

Figure 4.4 Stock Different manipulations

The vignette continues with another sentence, “This is the picture of both ice creams on the shelf”. Here is the part where manipulations of LEP stock happens. Participant will be shown randomly, one picture from three pictures in figure 4.4. In Equal conditions, both of limited edition Houjicha flavors and original Chocolate flavor are stocked at 72% (26) of its fully capability in the shelf, maximum 36 cups. In Abundance condition, the Houjicha flavors are stocked at 72% while the

Chocolate flavors are stock at 25% (9 out 36) cups. On the contrary, the Depleted condition is where the Houjicha flavors are stocked at 25% and the Chocolate flavors are stock at 72% of its capacity.

When the participant finishes the vignette, they can move on to the fourth page. The questions in fourth pages are centered on measuring consumer preferences on both flavors. The main question format is, "Referring to shelf picture, the Limited Edition Houjicha & Toffee Crunch (original Chocolate Macadamia) flavor is". Below of each question are ten bi-polarized characteristic of products evaluations, using 1-6 range scale. The first three characteristics are product in shelf evaluations (Parker & Lehmann, 2011) that measured Popularity (Very unpopular – Very Popular), Quality (Low – High), and Stoking Frequency (Hardly ever restocked – Constantly Restocked). Furthermore, to measure scarcity effect itself, a four set of characteristic was adopted from Gierl & Huettl (2010), there are Attractiveness (very unattractive – very attractive), Interest (very uninteresting – very interesting), Appeal (very unappealing – very appealing) and Bad-Good. Next, to check the uniqueness of LEP flavor compare to the SVP flavor, there are Predictable-Novel, Dull-Exciting, and Ordinary-Unique (Andrews & Smith, 1996). All questions must be answered before they can continue to the next part.

Consumer product evaluation-related questions are asked in the fifth part of this survey. There are total five questions including two filler questions. The filler questions are located in the earlier part. The first one is asking about what is the flavor that locate in the lower shelf, with a multiple choices answer of Chocolate flavor followed by limited edition Houjicha flavors. The second question, and the final filler is asking about the price of both ice cream displayed in the early picture of figure 4.4. The third and fourth question are asking the participants to rank their interest to try Chocolate Macadamia flavor and limited edition Houjicha & Toffee crunch respectively (the range is 1:not interested at all – 6:Very Interested). The final question is asking which flavor of the two they would purchase. Instead of plain text, the options were given as pictures of the ice-cream cup, making it more natural like in selecting product in real shopping situations.

Moving to the sixth page, this part is intended to measure participant's exploratory acquisitions of product (EAP) tendency. Based on Baumgartner & Steenkamp (1996) explorative behavior aptitude test, there are 10 items to measure EAP tendency. Those items are following:

1. *Even though certain food products are available in a number of different flavors, I tend to buy the same flavor. (*)*
2. *I would rather stick with a brand I usually buy than try something I am not very sure of. (*)*
3. *I think of myself as a brand-loyal consumer. (*)*
4. *When I see a new brand on the shelf, I'm not afraid of giving it a try.*
5. *When I go to a restaurant, I feel it is safer to order dishes I am familiar with. (*)*
6. *If I like a brand, I rarely switch from it just to try something different. (*)*
7. *I am very cautious in trying new or different products. (*)*
8. *I enjoy taking chances in buying unfamiliar brands just to get some variety in my purchases.*
9. *I rarely buy brands about which I am uncertain bow they will perform. (*)*
10. *I usually eat the same kinds of foods on a regular basis. (*)*

During the online survey, the order of the questions is randomized. Participants are asked to rate each item within range of 1 (strongly disagree) to 6 (strongly agree). The items with the asterisk sign means the item are unfavorable and need to be reversed in calculations.

Finishing the questions part, participant were told that the survey is finished and now they are eligible to participate in the voucher lucky draw. Should they wish to participate, an email is required to contact them if they win. Finally, at the eighth page, participants were thanked for completing the survey. Also, this part also functions as a debriefing for participant regarding the true purpose of this research. Last of all, they were told not to share the true survey purpose with other who hasn't taken the survey yet.

Section 4. Data Analysis Method

Several steps of data analysis are going to be used in this research. The filtering analysis will begin by selecting survey answer for a valid answer. Besides completing the survey, the answer is categorized as valid if the participant meets with survey prerequisite regarding the Japanese residence status. Therefore, if the IP check shows the participant are not from Japan domain, they will be excluded for further analysis.

The next step is processing data from the EAP aptitude test to clarify EAP level variable (high/low). As mentioned before, the unfavorable item will be reversed first. Then, an average would be calculated from the ten item ratings given. The higher average score makes the participants belong to a high level EAP tendency, and the low average score makes them in low level. A median split is going applied to determine how to categorize high and low EAP score, (Menon & Kahn, 1995).

Concerning consumer preference, related data from the survey will be processed mainly by using two-way ANOVA method with the help of SPPS software. Furthermore, a three separate analysis will created. Two separations are based on each of flavor variations alone, and the analysis of range different analysis between two flavor preferences (Parker & Lehmann, 2011). Therefore, the first two are analysis of consumer preference analysis within limited edition Houjicha & Toffee Crunch flavor, followed by analysis within original Chocolate macadamia flavor. The third one will be consumer preference analysis based on different score between the limited edition and the original one.

All of these three will foresee 6 things in consumer preferences: product popularity, quality, restock frequency, attractiveness, perceived novelty and interest to try the product. Additionally, participant final choice of product will be analyzed only in the range different analysis.

CHAPTER 5 RESULTS AND ANALYSIS

Several data analyses will be discussed in this chapter. Generally, the analyses are about the effect of main variables effects on consumer preferences in each flavor. This discussion will be opened by overviewing the description of participants, including the process of answer validations. Next, the preference analysis of limited edition flavor will be presented; the counterpart of standard flavor and the range difference of two flavor data as a basis for final analysis.

Section 1. Participant Overview

A total of 174 participants answered this online survey. The survey period lasted for four weeks from May 5th, 2014 to June 12th, 2014. In the online database, the number of respondents is actually more than 300, but half of it consisted of incomplete answers. Most of these answers resulted from participants filling in the survey partially without checking the question, filling in the survey halfway, or stopping in the middle of survey. These participants are not included since the Surveygizmo service only downloads complete answers.

Afterwards, the survey answers were screened for participants IP, or digital locations during the time they filled the survey. This survey required the participant to currently reside in Japan for more than 6 months. Hence, only people who shown to be have Japanese IPs will be accepted for further analysis. Furthermore, if the participant is a foreigner, they will be probed as to when they began living in Japan. Based on this requirement, there were 15 participants that were eliminated due to not meeting this condition.

In turn, only 159 participants will be used for further analysis. Regarding the gender, the composition is almost equal, with female participants making up 45%, or 72 respondents. Majority of the participant identified themselves within the age range of 21 – 30 years old (68%) and 31 – 40 years old (17%). Only three people belonged to the age range 41 or older. The occupation of the participants mostly is students, followed by employees with 77.4% and 14.5% percentage respectively. Participants reside in several prefectures, covering 28 prefectures of Japan's 47

prefectures. Nevertheless, the participant are concentrated in big city areas, like Tokyo (50.9%), Kanagawa (7.5%) or Hokkaido (5%).

As this survey was open to any nationalities, there were lots of participants from various countries, including Japan itself. About 9% or 15 participants were Japanese citizens. Although the majority of participants were Indonesian, taking up to 65% or 103 participants, there were also a small number of Thai (6%), Malaysia (3%) and Taiwanese (3%) participants. The complete data for nationalities can be seen at figure B in the appendix. For foreigner residential status, the shorter was 7 months, whilst the longest one was 227 months, and, in average, participants have resided in Japan for 42.3 months.

Using the participant's data, the next process would determine participant level on Exploratory of Acquisition Product (EAP) tendency. Beginning with finding an average of 10 EAP items from Baumgarnter & Stenkamp (1996) for each participants. Here the average is 3.48, where a higher score means high tendency in seeking of product variety. Then, to categorize which belongs to high EAP tendency or to low EAP, the score is split by the median score (Menon & Khan, 1996). Hence, with the median score 3.5, there are 82 participants categorized into either a high EAP tendency or 77 participants for low EAP tendency.

Table 5.1 Total Spreading of Participants

		Stock of LEP in Shelf			TOTAL
		Abundance	Equal	Depleted	
EAP Level	High EAP	36	23	23	82
	Low EAP	25	23	29	77
TOTAL		61	46	52	159

Overall, the amount of participants for each condition is summarized in the table 5.1 above. This spread of participants will used as the main data analysis in the next following sections.

Section 2. Preference of limited edition Houjicha & Toffee Crunch

Within the limited edition Houjicha & Toffee Crunch flavor, a two-way ANOVA calculation reveals that there is almost no significant effect from all variables (table 5.2). For EAP variables, a

significant difference occurred only on quality valuation ($F(1,153)=3.971$, $p<0.05$). Meanwhile, the effect of scarcity from stock modification is shown in several aspects. The strongest effect is on popularity ($F(2,153)=11.214$, $p<0.01$) and restock frequency ($F(2,153)=7.139$, $p<0.05$). Different stocks of products in shelf also affect consumer evaluations of product attractiveness ($F(2,153)=7.139$, $p<0.05$). However, there is no interaction effect of EAP tendency and stock differences towards any consumer preference.

Table 5.2 Analysis of main effect and interaction effect

Source	Dependent Variable	Df	F	Sig.
EAP	Popularity	1	.798	.373
	Quality	1	3.971	.048*
	Stock Frequency	1	2.931	.089
	Attractiveness	1	2.918	.090
	Perceived Novelty	1	.429	.513
	Interest to Try	1	.004	.947
Stock	Popularity	2	11.214	.000*
	Quality	2	.953	.388
	Stock Frequency	2	7.139	.001*
	Attractiveness	2	3.523	.032*
	Perceived Novelty	2	.731	.483
	Interest to Try	2	1.678	.190
EAP * Stock	Popularity	2	2.520	.084
	Quality	2	1.072	.345
	Stock Frequency	2	.154	.858
	Attractiveness	2	.263	.769
	Perceived Novelty	2	.146	.864
	Interest to Try	2	1.540	.218

* The mean difference is significant at the .05 level.

The pairwise comparison analysis represents the total average of EAP in table 5.3, the difference in quality among high and low level EAP is -.383. This means low-level EAP participants are rating the limited edition Houjicha and Toffee crunch flavor as better quality than the high-level EAP. Considering the low-level EAP proposed to avoid a new variant product like the limited edition Houjicha & Toffee Crunch flavor, this pattern is unexpected. More surprisingly, despite not yielding a significant difference statistically, this pattern was seen amongst the other five consumer preference of Houjicha flavor, with most of the low-level EAP rate 0.2 point higher. Still, for interest

to try the limited edition Houjicha flavor, low-level EAP participant rate similarly with only 0.02 higher than their counterpart of variety seeking participant.

Table 5.3 Pairwise comparison of Houjicha & Toffee Crunch flavor

	Total Average		Total Average		
	High EAP	Low EAP	Abundance	Equal	Depleted
Popularity	3.43	3.62	3.11	3.26	4.20
Quality	3.50	3.83	3.51	3.78	3.78
Restock Frequency	3.37	3.70	3.70	3.90	3.02
Attractiveness	3.60	3.91	3.43	4.01	3.82
Perceived Novelty	3.76	3.90	3.67	3.97	3.85
Interest to Try	4.01	4.03	3.73	4.15	4.20

For stock difference variables, a Post-Hoc analysis revealed a significant pattern that is expected from popularity, stock frequency and attractiveness. Participant rate LEP was less popular in abundance condition than in depleted condition (Δ= -1.09). While equal condition is significantly lower than depleted condition (Δ= -.94). There was no restocking difference between abundance and equal condition. Yet, the nature of less stocked LEP in depleted condition seemed different than abundance and equal condition (Δ= -.67 and Δ= -.87, respectively). On the other hand, attractiveness differed only between abundance condition and equal condition, in which equal condition is rate more attractive (Δ= -.59).

Table 5.4 Interaction comparison of Chocolate Macadamia flavor

Stock of LEP	Abundance		Equal		Depleted	
EAP Tendency	High	Low	High	Low	High	Low
Popularity	2.86	3.37	3.00	3.52	4.44	3.97
Quality	3.50	3.52	3.44	4.13	3.57	4.00
Restock Frequency	3.58	3.80	3.65	4.13	2.87	3.17
Attractiveness	3.33	3.52	3.76	4.27	3.67	3.95
Perceived Novelty	3.67	3.67	3.90	4.04	3.71	3.98
Interest to Try	3.61	3.84	4.00	4.39	4.43	3.86

As mentioned before, there was no interaction effect support based on the calculations for limited edition Houjicha flavor. Nevertheless, the pattern of consumer preference resulting from various combinations between EAP levels and stock differences are worth a look (table 5.4). If we look at the level of EAP, often low-level EAP participant give higher rating among six consumer preferences compared to high-level EAP, notably in equal conditions, with few exceptions in depleted conditions. However, when comparing between three stock levels, high-level EAP reached the lowest and highest rate more often than low-level EAP participant. When rating popularity was variable, they scored both the lowest in abundance conditions (μ= 2.86) and the highest (μ=4.44) in depleted conditions. Furthermore, variety seekers seem to have greatest rating in depleted conditions, also. When we estimated the restocking frequency, high-level EAP participants gave a lower restocking frequency (μ= 2.87) for Houjicha flavor in depletion condition than the low-level EAP participants, even among other conditions as well. They also stated higher interests to try the limited edition Houjicha flavor in depleted condition (μ= 4.43, Δ= .57) compare to low-level EAP.

Section 3. Preference of original Chocolate Macadamia flavor

1. Preference of original Chocolate Macadamia flavor

Regarding analysis within original Chocolate Macadamia flavor, both EAP and stock difference affecting just a few of consumer preferences (table 5.5). Two-way ANOVA calculation is resulting in a significance main effect for EAP towards popularity ($F(1,153)=5.981$, $p<0.05$), stock frequency ($F(1,153)=4.775$, $p<0.05$), and also attractiveness ($F(1,153)=5.020$, $p<0.05$). The stock difference variable has a significant effect only on product popularity ($F(2,153)=10.999$, $p<0.01$).

Meanwhile, a pairwise comparison (table 5.6) reveals the similar pattern as the analysis of the Houjicha and Toffee Crunch flavors, especially in the difference between high and low-level EAP participants. Generally, in all six consumer preferences, low-level EAP participant give a bigger score than high-level EAP. In particular, the significant difference occurs in popularity (Δ= -.528), then restocking frequency (Δ= -.494), and in product attractiveness (Δ= -.376). Here, the tendency of low-level EAP participant to rate Chocolate Macadamia flavor more favorably than the high-level EAP is quite predictable. Consider the idea that a variety avoider does not prefer to try the limited edition Houjicha flavor, instead choosing the original flavor. On the contrary, a variety seeker would

prefer the uncommon product more, leading to a lower valuation of the original Chocolate Macadamia flavor.

Table 5.5 Analysis of main effect and interaction effect

Source	Dependent Variable	df	F	Sig.
EAP	Popularity	1	5.981	.016*
	Quality	1	3.340	.070
	Stock Frequency	1	4.775	.030*
	Attractiveness	1	5.020	.026*
	Perceived Novelty	1	2.839	.094
	Interest to Try	1	2.264	.134
Stock	Popularity	2	10.999	.000*
	Quality	2	1.507	.225
	Stock Frequency	2	2.607	.077
	Attractiveness	2	.543	.582
	Perceived Novelty	2	.085	.918
	Interest to Try	2	.155	.857
EAP * Stock	Popularity	2	1.975	.142
	Quality	2	2.770	.066
	Stock Frequency	2	.385	.681
	Attractiveness	2	1.110	.332
	Perceived Novelty	2	.861	.425
	Interest to Try	2	1.346	.263

* The mean difference is significant at the .05 level.

Before continuing to discuss about the main effect of stock difference, it should be noticed that the stock difference condition for Chocolate Macadamia is a reversed version condition. Hence, when it's referring to the Abundance condition, it should be interpreted as the condition where the original Chocolate Macadamia is stocked less than Houjicha flavor, emulating strong demand for Chocolate Macadamia flavor. In turn, the Depleted condition means that the Chocolate flavor is stocked more than the Houjicha flavor, emulating an unfavorable demand for Chocolate Macadamia flavor.

The post-hoc analysis for product popularity unveils that a significant different occurs only between depleted conditions to the other two conditions, abundance condition (Δ= -1.17) and equal condition (Δ= -.72). There is no significant difference between abundance and equal conditions. This finding resonates with the idea of shelf based-scarcity, where the greater stocked Chocolate

Macadamia flavor is seen as less popular than the lower stocked Houjicha flavor. However, looking at the other consumer preference, the effect of stock difference is quite weak. Especially for attractiveness, novelty and interest to try a new flavor, the score between three stock conditions seems to be almost flat. As comparison, the popularity rate is decreasing from abundance, equal and depleted conditions respectively. Also, within Houjicha flavor analysis, the trend is decreasing from either depleted or equal to abundance condition.

Table 5.6 Pairwise comparison of Chocolate Macadamia flavor

	Total Average		Total Average		
	High EAP	Low EAP	Abundance	Equal	Depleted
Popularity	3.57	4.10	4.38	3.93	3.19
Quality	3.79	4.14	4.09	4.11	3.73
Restock Frequency	3.68	4.17	3.57	4.13	4.08
Attractiveness	3.61	3.99	3.81	3.91	3.70
Perceived Novelty	2.99	3.29	3.19	3.11	3.13
Interest to Try	3.67	3.97	3.85	3.74	3.88

Table 5.7 Interaction comparison of Chocolate Macadamia flavor

Stock of LEP	Abundance		Equal		Depleted	
EAP Tendency	High	Low	High	Low	High	Low
Popularity	4.36	4.40	3.39	4.48	2.96	3.41
Quality	4.06	4.04	3.61	4.61	3.70	3.76
Restock Frequency	3.39	3.76	3.74	4.52	3.91	4.24
Attractiveness	3.71	3.90	3.54	4.28	3.59	3.79
Perceived Novelty	3.16	3.23	2.80	3.42	3.03	3.23
Interest to Try	3.61	4.08	3.44	4.04	3.96	3.79

Moving to the interaction data (table 5.7) between EAP and stock difference, most of the case, low-level EAP participants give greater rate than high-level EAP participants across the three conditions. In equal conditions, the difference is relatively high ($\Delta>0.5$), compared to the abundance and depleted conditions that even have similar rate. For high-level EAP participants, they rate the smallest number of popularity ($\mu= 2.96$) in depleted conditions. They also deemed the original

Chocolate Macadamia flavor as the most common in equal conditions (μ= 2.83), even when compared to low EAP-participants. This is surprising as one would predict that variety seekers would evaluate normal products less when they are relatively abundant in depleted conditions. Also, another unexpected data came from interest to try variables. Here, the high-level EAP participants gave higher rate than its counterpart, for depleted condition instead of for abundance condition, where the original Chocolate Macadamia flavor was supposed to bring more favorable positions.

Section 4. Range Different analysis of two flavors

The data for range different analysis is a result of rating discrepancies between the limited edition Houjicha & Toffee Crunch flavor and the original Chocolate Macadamia flavor. Through this calculation, it can provide a better way to compare the two flavors, helping to determine which are more favorable. Therefore, if the rate score is negative (eg. In table 5.9, mean of popularity in high-level EAP is -.43), that means the original Chocolate Macadamia flavor is more favorable than the limited edition Houjicha & Toffee Crunch flavor. While positive score would indicate that participant prefer the limited edition Houjicha flavor over the Chocolate Macadamia flavor.

Additionally, two sections differed, this time the choice share was included as a consumer preference variables. The choice share is the participant's final preference of which product between the two flavor ice creams they will chose to buy. To be precise, the choice share variable is included in main effect analysis, but it will have separate interaction comparison chart shown in percentage instead of mean.

Refering to the Table 5.8, there is no main effect of EAP level difference on any consumer preference, including choice share. Likewise, there is no interaction effect found towards any of the consumer preference variables. However, manipulation of stock difference yield has a significant effect towards several variables. Those seen to be have major effects are popularity ($F(2,153)=23.801$, $p<0.01$), product quality ($F(2,153)=4.897$, $p<0.05$), restocking frequency ($F(1,153)=19.479$, $p\leq0.01$) and products attractiveness ($F(1,153)=4.581$, $p<0.05$).

Table 5.8 Analysis of main effect and interaction effect

Source	Dependent Variable	df	F	Sig.
EAP	Popularity	1	1.448	.231
	Quality	1	.033	.856
	Stock Frequency	1	.351	.554
	Attractiveness	1	.088	.767
	Perceived Novelty	1	.385	.536
	Interest to Try	1	.841	.360
	Choice Share	1	.681	.410
Stock	Popularity	2	23.801	.000*
	Quality	2	3.532	.032*
	Stock Frequency	2	6.793	.001*
	Attractiveness	2	3.400	.036*
	Perceived Novelty	2	.787	.457
	Interest to Try	2	1.209	.301
	Choice Share	2	.537	.585
EAP * Stock	Popularity	2	2.274	.106
	Quality	2	1.001	.370
	Stock Frequency	2	.082	.921
	Attractiveness	2	.213	.808
	Perceived Novelty	2	.372	.690
	Interest to Try	2	.036	.964
	Choice Share	2	.134	.875

* The mean difference is significant at the .05 level.

In pairwise comparison analysis (Table 5.9) the EAP result is different than from analysis within one flavor before. Here, high-level EAP participants rate the limited edition Houjiha and Toffee Crunch flavor as more favorable than low-level EAP participants except in quality criteria, as they get bigger score in all other criteria. Although most of the score are negative, which means Houjicha flavor is less favorable than the Chocolate Macadamia flavor. Focus can be given more on perceived novelty and interest to try. In both dimension, the score is positive for both high-level EAP participants and low-level EAP participants, which means Houjicha flavor product is considered more favorable than the Chocolate Macadamia flavor.

Table 5.9 Pairwise comparison of range different between two flavors

	Total Average		Total Average		
	High EAP	Low EAP	Abundance	Equal	Depleted
Popularity	-0.14	-0.48	-1.27	-0.67	1.02
Quality	-0.29	-0.25	-0.54	-0.33	0.06
Restock Frequency	-0.31	-0.47	0.12	-0.24	-1.06
Attractiveness	-0.02	-0.08	-0.38	0.11	0.13
Perceived Novelty	0.76	0.60	0.48	0.86	0.71
Interest to Try	0.35	0.06	-0.12	0.46	0.27

Amongst the three differences, the depleted condition, where LEP stock products were less than SVP, mostly creates the highest value amongst the other two conditions. Thus implies that the limited edition Houjicha flavor is considered more favorable than the original flavor. On the contrary most of the abundance conditions have a negative score, which might suggest shelf-based scarcity affecting their preference too, albeit in small effect.

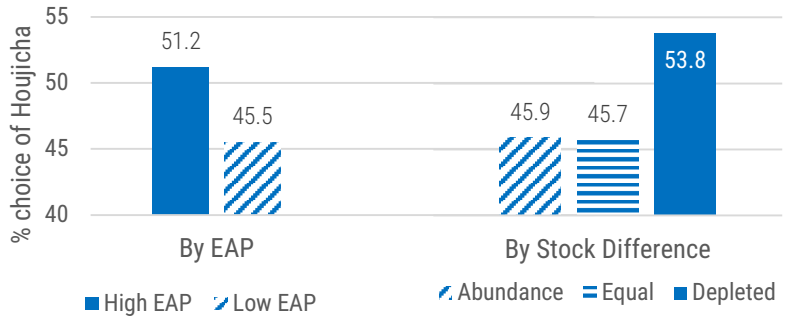
Table 5.10 Interaction comparison of range different between two flavors

Stock of LEP	Abundance		Equal		Depleted	
EAP Tendency	High	Low	High	Low	High	Low
Popularity	-1.50	-1.04	-0.40	-0.96	1.48	0.55
Quality	-0.56	-0.52	-0.17	-0.49	-0.13	0.24
Restock Frequency	0.19	0.04	-0.09	-0.39	-1.04	-1.07
Attractiveness	-0.39	-0.38	0.22	-0.01	0.09	0.16
Perceived Novelty	0.51	0.44	1.10	0.62	0.68	0.75
Interest to Try	-0.08	-0.24	0.57	-0.07	0.48	0.35

The interaction table 5.10 give better understanding of pattern between three conditions. In equal condition, variety seeker give bigger score in all criteria compared to variety avoider. Overall, they valued Houjicha flavor higher than the variety avoider under the equal condition. While in abundance condition and depleted condition, the score varied between high-level EAP participants and low-level EAP consumers. Furthermore, if we see each variable, some are showing persistent

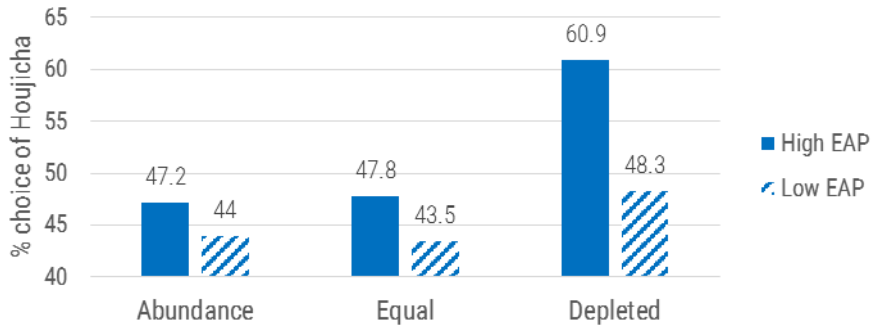
moves. For perceived novelty, all scores are positive, suggesting that the limited edition Houjicha flavor is indeed more unique than the Chocolate Macadamia flavor even among low-EAP.

Figure 5.1 Total Choice Share of Houjicha Flavor (LEP product)



Moving to the total choice share of Houjicha flavor (figure 5.1), generally high-level EAP participants choose Houjicha flavor more than low-level EAP participants. Although not significant, the result gives small support to the hypothesis. Furthermore, among three conditions of stock different, the most distinctive share of Huoujicha flavor is from depleted condition, with 53.8% share. This was predicted since the limited edition Houjicha being stock less would create more favorable condition. Nevertheless, the similar score between abundance and equal condition is unexpected. Under shelf-based scarcity scenario, the Houjicha flavor should be less chosen as the Chocolate Macadamia turns into a more favorable offer.

Figure 5.2 Interaction choice share of Houjicha flavor



More detail of choice share can be seen in Figure 5.2. Here, the most distinctive value in this chart is the score of variety seeker in depleted conditions, which is 60.9 percentage share, almost reflecting the pattern of the total choice share. Depleted conditions also seem to have effect for variety avoider as it has incremental increase compare to other two conditions. This result might suggest that shelf-based scarcity for limited edition product might affect more high-EAP participants, while low-EAP participants are not affected when SPV product is stock less on abundance conditions.

CHAPTER 6 CONCLUSION AND SUGGESTIONS FOR FUTURE STUDY

This chapter will summarize and answer the research question posed in this research through the conclusion part. Then it will continue to discuss about the future direction in which the research could be done. Finally, based on the findings of this research topic, a managerial implication for company or store would be given.

Section 1. Conclusion

According to the statistic calculations in the previous chapter, only a few consumer preferences were shown to be affected by the independent variable (EAP level and stock difference conditions). A summary of which variable that had significant effect is shown in table 6.1. This statistical finding is too small to support the main hypothesis proposed in chapter 3. Therefore, this conclusion is going to discuss the findings from the survey raw data, instead of the statistical significance.

Table 6.1 Summary of Main Effect

		POP	QLT	FRE	ATT	NOV	TRY
Stock	HTC	X	-	X	X	-	-
	CM	X	-	-	-	-	-
	Range	X	X	X	-	-	-
EAP	HTC	-	X	-	-	-	-
	CM	X	-	X	X	-	-
	Range	-	-	-	-	-	-

The main finding of this survey research is as follow:

1. When comparing (range different) a limited edition product (LEP) and standard variant product (SVP), high-level EAP consumer or variety seeker is indeed appraising LE product more than low-level EAP consumer who tend to avoid new products. However, when

comparing within one flavor, variety seeker consumer appraise it less than variety avoider consumer.

2. Regarding on choosing the product itself, the share of choosing LEP product is bigger among the variety seeker than among the variety avoider.
3. Under abundance condition within LEP, both of high and low-level EAP consumer appraise LE product less than in equal condition. However, the low-level EAP consumer has a steeper drop.
4. Under abundance condition within SVP, high-level EAP consumer increases the appraisal of SVP from equal condition following the pattern predicted. Yet, the low-level EAP consumer gives smaller rate of SPV than in equal conditions.
5. Under depleted condition within LEP, high-level EAP consumer is having increasing appraisal from equal conditions. In contract, low-level EAP consumer didn't show effect on shelf-based scarcity, and appraise SPV lower than in equal condition instead.
6. Under depleted condition within SVP, low-level EAP consumer is rate SPV less than in equal conditions. Meanwhile, the high-level EAP appraise SPV more than in equal condition, although there is a bit flat difference.
7. When comparing LEP and SVP, both high and low-level EAP consumer rate LEP in escalating pattern from abundance, equal, to depleted condition respectively.
8. Post hoc analysis found that the difference between depleted and equal (or abundance) condition is more distinctive than equal to abundance conditions. This might help explaining similar pattern of biggest choice share in depleted conditions.
9. It may conclude that scarcity effect is the strongest in depleted condition and among high-level EAP, compare to abundance condition for low-level EAP.

Section 2. Future Research Suggestions

This research opens a door to highlighting how consumers might evaluate limited edition products for FMCG industries. One weakness of this research is the lack of participants, which could contribute to the statistical result. Future research should try to collect larger samples to gain a better statistical result.

The way of online survey could affect how consumer filled the questionnaire. For future research it would be the best to have more controlled conditions, like gather them in computer rooms. Variable control is also needed as participant perceptions of limited editions are not really measured here. More complete calculation model used by Wu and Hsing (2006) could be applied.

Section 3. Managerial Implications

Regarding the limited edition product, FMCG companies should keeping making them, as limited edition product might keep consumer engaged with the brand or gain quick sales boosts (Chang, 2007). Company can also design market research to determine how different or how unique the new tastes are for the limited editions. They might want to find a unique taste that can be attractive for both variety seeker and variety avoider. Lastly, FMCG companies can collaborate with retailers to adjust their limited edition product and standard variant products. With the pattern of shelf-based scarcity of depleted conditions, the ratio between two products in the shelf should be shown more for SVP and less stock for LEP.

REFERENCE

[1.] Aggarwal, P., Jun, S. Y., & Huh, J. H. (2011). Scarcity messages. *Journal of Advertising*, 40(3), 19–30.

[2.] Amaldoss, W., S. Jain. (2005). Conspicuous consumption and sophisticated thinking. *Management Science*, 51(10) 1449–1466.

[3.] Andrews, J., & Smith, D. C. (1996). In search factors of the marketing the imagination : of products mature affecting creativity for marketing programs. *Journal of Marketing Research*, 33(2), 174–187. Retrieved from http://www.jstor.org/stable/3152145

[4.] Ashcraft, Brian. (2014). Fancy japanese bananas have serial numbers. http://kotaku.com/fancy-japanese-bananas-have-serial-numbers-1573920272 accessed at July, 1st 2014, 3:48 pm

[5.] Baumgartner, H., & Steenkamp, J.-B. E. M. (1996). Exploratory consumer buying behavior: Conceptualization and measurement. *International Journal of Research in Marketing*, 13(2), 121–137. doi:10.1016/0167-8116(95)00037-2

[6.] Betts, K. 2001. Precious, yes; But are they worth the wait? New York Times (December 2) 9.1.

[7.] Bhat, H. (2013). Limited edition mania. Businessline. Retrieved from http://search.proquest.com/docview/1390462036?accountid=14891

[8.] Branch, S. 2004. Hermès's jelly ache. Wall Street Journal (April 9) B1.

[9.] Brehm, Jack W. (1966), *A Theory of Psychological Reactance*, Morristown, NJ: General Learning Press.

[10.] Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17, 475 – 482.

[11.] Brock, Timothy C., ed. (1968), *Implications of Commodity Theory for Value Change*, New York: Academic Press.

[12.] By, Y. O. (1998, Dec 15). Kitty-mania grips grown-ups in japan. Wall Street Journal Retrieved from http://search.proquest.com/docview/398657315?accountid=14891

[13.] Chang, I. (2007). Limited-edition products help garner quick impact, demand. PRweek, 10(30), 9. Retrieved from http://search.proquest.com/docview/232050249?accountid=6180

[14.] Cialdini, Robert B. (2008), *Influence: Science and Practice*, Boston: Pearson Education.

[15.] Cornoe, G., & Jeanne, O. (1997). Conspicuous consumption, snobbism and conformism. *Journal of Public Economics*, 66, 55–71.

[16.] Daisuke, Hori. 2008.最寄品における期間限定製品への消費者の反応

[17.] EA unveils battlefield 3 limited edition and north american pre-order bonus items. (2011, Aug 04). Business Wire Retrieved from http://search.proquest.com/docview/881076247?accountid=14891

[18.] Edwards, S. M., Li, H., & Lee, J. (2002). Forced Exposure and Psychological Reactance: Antecedents and Consequences of the Perceived Intrusiveness of Pop-Up Ads. *Journal of Advertising, 31* (3), 83–95.

[19.] Esch, F., & Winter, K. (2010). Evaluation and Feedback Effects of Limited Editions in FMCG Categories. *Advances in Advertising Research (Vol. 1)*, pp. 21-36

[20.] Fitzsimons, & Donald R. Lehmann (2004). Reactance to Recommendations: When Unsolicited Advice Yields Contrary Responses. *Marketing Science*, 23 (1), 82-94.

[21.] Garretson, Judith A. and Scot Burton (2003), "Highly Coupon and Sale Prone Consumers: Benefits beyond Price Savings," *Journal of Advertising Research*, 43(2), 162-72.

[22.] GATSBY MOVING RUBBER limited edition trial set now available on amazon U.S. (2012, Dec 17). PR Newswire Retrieved from http://search.proquest.com/docview/1238982991?accountid=14891

[23.] Gierl, H., & Huettl, V. (2010). Are scarce products always more attractive? The interaction of different types of scarcity signals with products' suitability for conspicuous consumption. *International Journal of Research in Marketing*, 27(3), 225–235. doi:10.1016/j.ijresmar.2010.02.002

[24.] Gierl, H., Plantsch, M., & Schweidler, J. (2008). Scarcity effects on sales volume in retail. The International Review of Retail, Distribution and Consumer Research, 18(1), 45–61. doi:10.1080/09593960701778077

[25.] Goodwin, C James. (2010). *Research in psychology: Methods and design (6th ed)*. Wiley.

[26.] Grabitz-Gniech, G. (1971). Some restrictive conditions for the occurrence of psychological reactance. *Journal of Personality and Social Psychology*, *19* (2), 188-196.

[27.] Griskevicius, V., Goldstein, N. J., Mortensen, C. R., Sundie, J. M., Cialdini, R. B., & Kenrick, D. T. (2009). Fear and loving in Las Vegas: Evolution, emotion, and persuasion. *Journal of Marketing Research*, 46(3), 384−395.

[28.] Gupta, S. (2013). The Psychological Effects of Perceived Scarcity on Consumers ' Buying Behavior. University of Nebraska.

[29.] Haagen-dazs(R) brand makes summer even sweeter with new gelato and limited edition flavors. (2014, May 01). PR Newswire Retrieved from http://search.proquest.com/docview/1520170210?accountid=14891

[30.] Limited edition fragrances: here today, gone tomorrow. (2000). Cosmetics, 28(3), 24. Retrieved from http://search.proquest.com/docview/206250261?accountid=6180

[31.] Lynn, M. (1989). Scarcity effects on desirability: mediated by assumed expensiveness? *Journal of Economic Psychology*, 10, 257–274.

[32.] Lynn, M. (1991). Scarcity effects on value: A quantitative review of the commodity theory literature. *Psychology and Marketing*, 8(1), 43−57.

[33.] Lynn, M. (1992). Scarcity's enhancement of desirability: The role of naive economic theories. *Basic and Applied Social Psychology*, 13(1), 67−78.

[34.] Lynn, M., & Harris, J. (1997). The Desire for Unique Consumer Products : A New Individual Differences Scale. *Psychology & Marketing*, 14(6), 601–616.

[35.] Menon, S, Kahn, B. E. (1995): The Impact of Context on Variety Seeking in Product Choices. In: *Journal of Consumer Research*, 22 (December): 285-295.

[36.] Meyer, John P. (1980). Causal attribution for success and failure: a multivariate investigation of dimensionality, formation and consequences. *Journal of Personality and Social Psychology*, 38 (May), 704–18.

[37.] Mittone, L., & Savadori, L. (2009). The scarcity bias. *Applied Psychology*, 58(3), 453–468.

[38.] Nintendo to launch zelda themed wii U bundle. (2013). Wireless News, Retrieved from http://search.proquest.com/docview/1432229922?accountid=14891

[39.] Snyder, C. R. (1992). Product scarcity by need for uniqueness interaction: A consumer catch-22 carousel? *Basic and Applied Social Psychology*, 13, 9−24.

[40.] Oses-Eraso, Nuria, Federic udina, and Montserrat Vilarich-Grau (2008), "Environmental versus Human-Induced Scarcity in the Commons: Do they Trigger the Same Response?" *Environmental and Resource Economics*, 40 (4), 529-550.

[41.] Parker, J. R., & Lehmann, D. R. (2011). When shelf-based scarcity impacts consumer preferences. *Journal of Retailing*, 87(2), 142–155. doi:10.1016/j.jretai.2011.02.001

[42.] Raju, P. S. (1980): Optimum stimulation level: its relationship to personality, demo- graphics, and exploratory behavior. *Journal of Consumer Research*, 7 (December), 272-282.

[43.] Swain, Scott D., Richard Hanna, and Lisa J. Abendroth (2006), How time restrictions work: the roles of urgency, anticipated regret, and deal evaluations. *Advances in Consumer Research*, 33, 523-25.

[44.] Tabuchi, H. (2008, Feb 22). Limited editon! limited edition! In Japan, the young line up to 'buy now'; tower records sells out. Walls Street Journal. http://search.proquest.com/docview/399008406?accountid=14891

[45.] Van Herpen, E., Pieters, R., & Zeelenberg, M. (2009). When demand accelerates demand: Trailing the bandwagon☆. *Journal of Consumer Psychology*, 19(3), 302–312. doi:10.1016/j.jcps.2009.01.001

[46.] Veblen, T. (1899/1965). *The theory of the leisure class*. New York: Kelly.

[47.] Verhallen, T. M. M., & Robben, H. S. J. (1994). Scarcity and preference: An experiment on unavailability and product evaluation. *Journal of Economic Psychology*, 15(2), 315–331. doi:10.1016/0167-4870(94)90007-8

[48.] Wason, K. D., Polonsky, M. J., & Hyman, M. R. (2002). Designing vignette studies in marketing. *Australasian Marketing Journal*, 10(3), 41–58. doi:10.1016/S1441-3582(02)70157-2

[49.] Wu, C., & Hsing, S. (2006). Less is More : How Scarcity Influences Consumers ' Value Perceptions and Purchase Intents through Mediating Variables. *Journal of American Academy of Business*, 9(2), 125.

[50.] Wu, W.-Y., Lu, H.-Y., Wu, Y.-Y., & Fu, C.-S. (2012). The effects of product scarcity and consumers' need for uniqueness on purchase intention. *International Journal of Consumer Studies*, 36(3), 263–274. doi:10.1111/j.1470-6431.2011.01000.x

APPENDIX

Figure A Pretest Participant Nationality Summary

Indonesian	34
Japanese	5
Taiwan	3
American	2
Malaysian	2
Australian	8
Canadian	1
China	1
Nigerian	1
Russian	1
Swedish	1
Thai	1
Uzbekistan	1
TOTAL	61

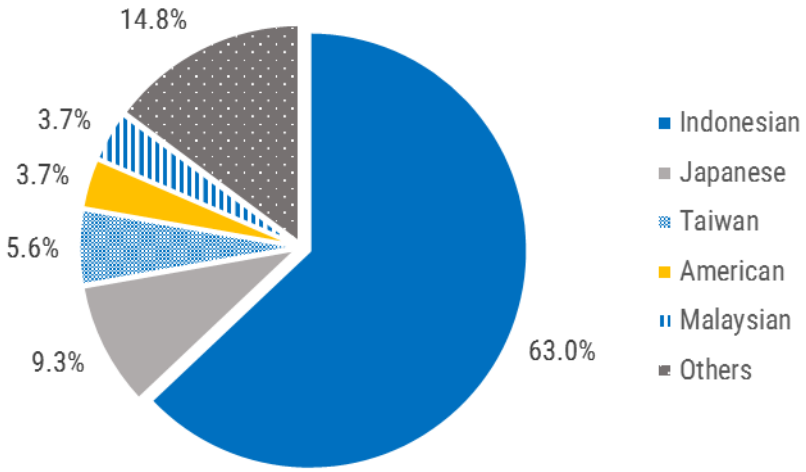


Figure B Pretest Participant Nationality Summary

Indonesia	103
Japan	15
Thai	9
Malaysia	5
Taiwan	5
America	3
China	3
Canada	2
Korea	2
Sweden	2
Uzbekistan	2
Hungarian	1
India	1
Iran	1
Norwegian	1
Poland	1
Saudi Arabia	1
Spanish	1
Vietnam	1
TOTAL	159